

## ABSTRACT

Gain setting of a receiving amplifier is performed by use of ASE light of a transmitting amplifier, without need of a particular light source for the receiving 5 amplifier gain setting. The gain setting method for the receiving amplifier includes the steps of detecting the necessity of gain setting of the receiving amplifier when the power of the receiving amplifier is turned on, requesting WDM transmission equipment in the preceding 10 station to output ASE light; in the WDM transmission equipment of the preceding station, based on the request for ASE light output, shutting off both passing-through light and added light, and outputting the ASE light corresponding to a predetermined number of wavelengths of 15 signal light; in the receiving amplifier of the WDM transmission equipment in the station of interest, performing the gain setting by use of the ASE light; and on completion of the gain setting, in the WDM transmission equipment of the station of interest, shifting to receive 20 an optical signal, and in the WDM transmission equipment of the preceding station, switching over to optical signal output.